



---

A.D. 1862, *5th August.* N° 2201.

---

SPECIFICATION

OF

JOHN RICHARD NICHOLL.

---

UTILIZING AND DISPOSING OF THE  
SEWAGE OF TOWNS AND VILLAGES.

---

LONDON:

PRINTED BY GEORGE E. EYRE AND WILLIAM SPOTTISWOODE,  
PRINTERS TO THE QUEEN'S MOST EXCELLENT MAJESTY:

PUBLISHED AT THE GREAT SEAL PATENT OFFICE,  
25, SOUTHAMPTON BUILDINGS, HOLBORN.

1862.







---

A.D. 1862, 5th AUGUST. N° 2201.

---

Utilizing and Disposing of the Sewage of Towns  
and Villages.

---

*(This Invention received Provisional Protection only.)*

**PROVISIONAL SPECIFICATION** left by John Richard Nicholl at the Office of the Commissioners of Patents, with his Petition, on the 5th August 1862.

I, JOHN RICHARD NICHOLL, of Streatham, in the County of Surrey, Clerk,  
5 do hereby declare the nature of the said Invention for “**IMPROVED MEANS OF AND APPARATUS FOR UTILIZING AND DISPOSING OF THE SEWAGE OF TOWNS AND VILLAGES,**” to be as follows:—

The object of this Invention is to provide an efficient and economical means for disposing of the sewage of towns and villages. To this end I  
10 propose to employ the natural porosity of the soil, where such is available, for disposing of the fluid portion of the sewage by natural filtration, having previously brought the sewage to the proper condition for filtering rapidly through the soil. Supposing, for example, I wish to dispose of the sewage of a town situate on or near a bed of chalk or gravel, I first remove the fœcal  
15 or other solid matters from the sewage in the following manner, and utilize it as an inodorous manure; thus, I lengthen the sewer or sewers which have been or may be formed by the addition of two, three, four, or more broad diverging channels, which, from their extended surface, will cause a sluggish flow of the sewage. Each of these diverging channels I fit with sluice valves,  
20 which permit of the discharge at suitable periods of the sewage into removable tanks. These tanks I propose shall form when in place a portion of the out-



---

*Nicholl's Method of Utilizing & Disposing of the Sewage of Towns & Villages.*

---

flowing channel, each tank forming the connection between the diverging channels and the outflow sewer leading to the filtering basins provided for the disposal by natural filtration of the liquid portion of the sewage. When the sluice valves are opened the sewage will be discharged into the removeable tanks. Before escaping from these tanks the fluid will have to pass through a filtering 5 sieve or strainer, and continue its onward course in the sewer; or it may, if need be, be passed through a second and finer strainer. The sewage flowing very slowly through the tanks will leave a continually accumulating deposit in them, and when any one of them is full its sluice valve is to be closed, a heavy lid fitting into the the tank; or other pressure may be applied for expressing 10 the remaining fluid from the tank, suitable perforations being made therein for admitting of the discharge of the fluid. The filled tank is now to be removed, and another substituted in its place to restore the communication between the detached parts of the sewer. When a tank is put into position, some chemical preparation calculated to fix ammonia and to act as a deodorizer 15 should be placed in it, and when it is removed thence, various desiccating substances may be added to its contents to convert the same into an inodorous and valuable manure. Having thus caused a subsidence of the greater part of the solid matter by passing the sewage slowly through one or more tanks and sieves, or strainers, I dispose of the remaining fluid by discharging it into 20 basins formed in the chalk or gravel, from which it will by natural percolation lose itself in the soil. When, however, any portion of the filtered fluid may with advantage be used for the purposes of irrigation, the same may be diverted to any proper receptacle, but otherwise I avail myself of the absorbing power of the local soil to dispose of the sewage treated as above described, 25 instead of resorting to the costly and sometimes almost impracticable plan of discharging the liquid sewage into adjacent waters. In some cases I may find it desirable to discharge the sewage on to filter beds or subsidence basins instead of portable tanks, and then get rid of the liquid now separated from the solid matters as above explained. 30

---

LONDON :

Printed by GEORGE EDWARD EYRE and WILLIAM SPOTTISWOODE,  
Printers to the Queen's most Excellent Majesty. 1863